

Evaluating the Effectiveness of Yellow Jacket Enforcement Techniques in I-2704 Workzone

Statement of Problem

In response to general concerns of workzone safety, State Highway Patrol (SHP) officers are experimenting with non-standard enforcement techniques. Operation Yellow Jacket is an enforcement operation that involves an officer in a DOT truck clocking vehicles with radar and relaying the information to marked SHP officers downstream who pull drivers over and write them tickets. This enforcement measure has been in place at the I-2704 workzone since the week of August 23rd and is scheduled to continue through the week of October 25th.

Project Scope

Project Goals

The goals of this project are as follows:

- (1) Determine if there is a difference in vehicle speeds when Operation Yellow Jacket enforcement is active (Monday through Friday, 6:00 AM – 3:00PM) and when Operation Yellow Jacket is inactive. This will be accomplished by collecting speed data *during* active Operation Yellow Jacket enforcement and *after* Operation Yellow Jacket enforcement measures have ceased on the same day.

- (2) Determine if there is a lasting impact on vehicle speeds once Operation Yellow Jacket project has been completed. This will be accomplished by taking speed measurements 1 week and 3 weeks after Operation Yellow Jacket has ended.

Measures of Effectiveness (MOEs)

- Vehicle speeds will be the measure of effectiveness for this project.

Data Collection Method

- A Lidar gun will be used to collect speed data at the site.
- Only off peak hours will be examined with this project. Tentative data collection times are from 10:00 AM to 2:00 PM and from 7:00 PM to 10:00 PM.
- At least 150 speed samples will be recorded during each collection period.
- Only unimpeded vehicles will be targeted for speed measurements. This allows us to determine if enforcement activities have an effect on the drivers that are selecting their own speeds. Vehicles in platoons will be avoided as they are not actively choosing their own speeds.
- Data will be collected two days per week for the weeks of September 27th, October 4th, and October 11th. All attempts will be made to collect data on Tuesdays, Wednesdays or Thursdays as these are typically seen as average travel days. This may have to be adjusted due to weather conditions.

- Speed data will be collected in both the Northbound and Southbound directions. Time periods used for data collection in a particular direction will be swapped between the two days. For example; if Northbound speed data was collected between 10:00 AM and 12:00 PM on day 1, Southbound speed data will be collected between 10:00 AM and 12:00 on day 2.
- All attempts will be made to collect data from an overpass or other inconspicuous spot. Pulling the vehicle off to the shoulder when collecting data may influence drivers to slow down or shy away from certain lanes to avoid the parked car.
- All data collection will be done under similar weather conditions.

Project Tasks

		Percent of Total Work Est. Completion Date
Task I	Project Management <ul style="list-style-type: none">Develop detailed project Work Plan	<u>5%</u> 9/04
Task II	Collect Data <ul style="list-style-type: none">Collect enforcement / non-enforcement speed data	<u>75%</u> 9/04 – 11/04
Task III	Data Analysis <ul style="list-style-type: none">Compile data and analyze for statistical significance	<u>15%</u> 12/04
Task IV	Document Findings and Recommendations <ul style="list-style-type: none">Prepare and present report on findings	<u>5%</u> 12/04

****Estimated completion dates may vary depending on enforcement schedule***